

Claims:

1. A support base for a bed mattress, the support base including an adjustable support means for selectively adjusting a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.
- 5 2. A support base for a bed mattress according to claim 1 with the adjustable support means able to selectively adjust a portion less than a quarter of the mattress.
3. A support base for a bed mattress according to claim 1 with the adjustable support means being positioned so as to adjust an end portion of the mattress to provide a headrest or footrest for the user of the bed.
- 10 4. A support base for a bed mattress according to claim 1 with the adjustable support means being positioned so as to adjust an middle portion of the mattress to provide a lower lumbar support or knee support for the user of the bed.
- 15 5. A support base for a bed mattress according to claim 1 with the adjustable support means being selectively operated by a powered means.
- 20 6. A support base for a bed mattress according to claim 1 with the adjustable support means being operated in conjunction with a folding of the plane of the bed to provide a backrest such that the adjustable support means provides a localised support relative to the folding plane of the bed.
- 25 7. A support base for a bed mattress according to claim 7 with the adjustable support means being operative in conjunction with powered operation of the folding bed.
- 30 8. A support base for a bed mattress according to claim 7 with the adjustable support means being operative in conjunction with mechanical operation of the folding bed.
9. A support base for a bed mattress according to claim 7 with mechanical

operation of the adjustable support means in conjunction with the folding bed uses one or more of levers, rods, plates, gussets and sliding mechanisms associated with the hinged folding of the bed to provide adjusting a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

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10. A support base for a bed mattress according to claim 7 with mechanical operation of the adjustable support means in conjunction with the folding bed uses cams associated with the hinged folding of the bed to provide adjusting a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

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11. A support base for a bed mattress according to claim 10 with the cams being rotational cams.

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12. A support base for a bed mattress according to claim 10 with the cams being linearly operative cams.

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13. A support base for a bed mattress having at least two planar portions with at least one able to rotate relative one another, and the support base further including an adjustable support means able to adjust a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress, and the support base still further including a differential displacement member connected with the at least two planar portions and the adjustable support means such that rotation of the at least one planar portion relative to said another causes adjustment of said portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

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14. A support base for a bed mattress according to claim 13 with the adjustable support means able to adjust a portion less than a quarter of the mattress.

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15. A support base for a bed mattress according to claim 13 with the adjustable support means being positioned so as to adjust an end portion of the mattress to provide a headrest or footrest for the user of the bed.

16. A support base for a bed mattress according to claim 13 with the adjustable

support means being positioned so as to adjust an middle portion of the mattress to provide a lower lumbar support or knee support for the user of the bed.

5 17. A support base for a bed mattress according to claim 13 with the adjustable support means being operated by a powered means.

10 18. A support base for a bed mattress according to claim 13 with the adjustable support means being operated in conjunction with a folding of the plane of the bed to provide a backrest such that the adjustable support means provides a localised support relative to the folding plane of the bed.

15 19. A support base for a bed mattress according to claim 13 with the adjustable support means being operative in conjunction with powered operation of the folding bed.

20 20. A support base for a bed mattress according to claim 13 with the adjustable support means being operative in conjunction with mechanical operation of the folding bed.

21. A support base for a bed mattress according to claim 13 with mechanical operation of the adjustable support means in conjunction with the folding bed uses levers associated with the hinged folding of the bed to provide adjusting a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

25 22. A support base for a bed mattress according to claim 13 with mechanical operation of the adjustable support means in conjunction with the folding bed uses cams associated with the hinged folding of the bed to provide adjusting a portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

30 23. A support base for a bed mattress according to claim 22 with the cams being rotational cams.

24. A support base for a bed mattress according to claim 22 with the cams being

linearly operative cams.

25. A support base for a bed mattress having at least two planar portions with at least one rotatable planar portion able to rotate relative an adjacent planar portion with
5 a planar flexible continuous mattress able to extend over both the rotatable planar portion and the adjacent planar portion, and the support base further including an adjustable support means at least partially mounted on the rotatable planar portion and selectively able to adjust a portion of the mattress resting on the rotatable planar portion out of the plane of extension of the adjacent remainder of the mattress wherein
10 the support base allows for adjustment from a continuous linear formation to a backrest formation with the adjustable support means providing localised support.

26. A support base for a bed mattress according to claim 25 further including a differential displacement member connected to the at least one rotatable planar
15 portion, said differential displacement member engaging said adjustable support means so as to displace the adjustable support means towards the a portion of the mattress resting on the rotatable planar portion such that rotation of the at least one planar portion relative to said another causes adjustment of said portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

27. A support base for a bed mattress according to claim 26 wherein the differential displacement member is connected to the rotatable planar portion and engages a fixed means so as to displace the adjustable support means towards the a portion of the mattress resting on the rotatable planar portion such that rotation of the
25 at least one planar portion relative to said another causes adjustment of said portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

28. A support base for a bed mattress according to claim 27 wherein the differential displacement member is an elongated member connected to the rotatable
30 planar portion and engaging a fixed means so as to extend at an differing angle to the rotating planar portion such that rotation of the rotating planar portion causes a differential movement of the differential displacement member to the rotating planar portion to displace the adjustable support means towards the a portion of the mattress

resting on the rotatable planar portion such that rotation of the at least one planar portion relative to said another causes adjustment of said portion of the mattress out of the plane of extension of the adjacent remainder of the mattress.

- 5 29. A support base for a bed mattress according to claim 26 including a housing having a plurality of transverse slats for supporting said mattress wherein one or more of said slats are individually adjustable relative to said housing to provide calibrated positive or negative height adjustment for each slat, characterized in that said height adjustment is provided by a means which is operable external to said housing.

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30. A support base according to claim 29 wherein said height adjustment means are cams fitted to said housing for rotational movement and cooperation with said slats to impart a vertical height adjustment to said slats.

- 15 31. A support base according to claim 30 wherein said cams are operated in pairs with one cam positioned at or near each end of said slats and wherein said cam pairs are operated simultaneously.

20 32. A support base according to any one of claims 29 to 31 wherein said calibration indicates the height of said slats relative to said housing.

33. A support base according to any one of claims 30 to 32 wherein said cam pairs are fitted to a common axle which can be accessed from outside said housing.

- 25 34. A support base according to any one of claims 30 to 33 wherein said cams extend the length of each individual slat.

30 35. A support base for a bed mattress including a housing having a plurality of transverse elongate cams for supporting said mattress and an adjustment means for said cams wherein one or more said cams are individually adjustable relative to said housing to provide calibrated positive or negative height adjustment for said mattress.

36. A support base according to claim 35 wherein said cams are operable external

to said housing.

37. A support base according to claim 36 wherein said height adjustment means are height adjusting blocks supporting said individually adjustable slats to impart a vertical height adjustment to said slats.

38. A support base according to claim 37 wherein said height adjusting blocks are calibrated to a height adjustment scale shared by other means for height adjustment.

39. A support base according to claim 38, wherein said adjustable slats enable height adjustment for more than one user position of said bed mattress.

40. A support base according to claim 39 wherein said housing has a hinged portion for raising to support the user in a partially upright position wherein the raiseable portion of said housing incorporates one or more transverse slats or transverse elongate cams for supporting said mattress wherein said slats or cams are individually adjustable relative to said housing to provide local adjustment of said mattress wherein said adjustment is provided by means which are operable external to said housing.

41. A bed and mattress structure that can be customised to individual users in a variety of forms assembled from kits provided at the point of sale to accommodate the musculoskeletal condition of the user; the mattress including separate components of springs and padding and one or more mattress covers which preferably combine one user's selection of springs and padding with a second user's selection incorporated in a separate mattress cover.

42. A bed and mattress structure according to claim 42 for double or queen or king sized beds wherein the two user's selected combination is retained together to form a single bed by means of a further mattress cover or by a continuous base.

42. A support base substantially as hereinbefore described with particular reference to the drawings.